US005676576A

United States Patent [19]

Shonting et al.

[11] Patent Number: 5,676,576

[45] Date of Patent: Oct. 14, 1997

[54] **SUBMARINE DEPLOYED SEA-STATE SENSOR**

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[21] Appl. No.: **701,336**

[22] Filed: **Aug. 22, 1996**

[51] **Int. Cl.**[6] **B63B 22/18**; H04B 11/00

[52] **U.S. Cl.** **441/26**; 441/1; 441/33; 73/170.034

[58] **Field of Search** 441/1, 32, 33, 441/21–26; 73/170.34, 170.29, 170.31, 170.33

[56] **References Cited**

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[57] **ABSTRACT**

A submarine deployed sea-state sensor includes an elongated housing having a nose cone and an aft end. The housing having a forward buoyant chamber for receiving an accelerometer and for causing the sensor to be buoyed up to the surface, where it will thereafter float in a spar buoy fashion. The housing has, aft of the buoyant chamber, a damping assembly including a longitudinally extending motion damping body, a communication link deployment subassembly and a lifting body, with both the damping assembly and the lifting body attached to a communication link interconnecting the accelerometer and a submerged platform so that, when the subassembly deploys a portion of the communication link between the lifting body and a submerged submarine and this portion of the communication line becomes taught, the lifting body is pulled from the housing and the motion damping body is pulled by the lifting buoy into a distended position from the main portion of the spar buoy. Initially, the motion damping body is telescoped in the housing by a sliding fit between the body and the housing, and the lifting body is releasably joined to the motion damping body by a detent. The distended portion of the motion damping body is defined by a fixed length strap arrangement disposed within the sensor's housing which is connected between the motion damping body and fixed structure located toward the top of the housing.

7 Claims, 5 Drawing Sheets